

CLAIMS

- [1] A pin assembly of a track roller bogie in a crawler type traveling apparatus, characterized by comprising:  
a pin including a lubricant filling hole inside thereof and a lubricant outflow hole for outflow of lubricant from the lubricant filling hole to an outer peripheral portion thereof; a first ring including an abutment face for abutting with the pin at one end thereof and fixed to the pin; a second ring fitted on the pin to contact with a portion of an other end face of the first ring in a pin axis direction and to be rotatable thereabout; and a third ring fixed to the pin to contact with a portion of an other end face of the second ring in the pin axis direction,  
wherein the pin assembly further comprises an annular recessed groove portion in a portion between respective contact end faces of the first, second, and third rings, and sealing means for sealing to prevent leakage of the lubricant is disposed in the recessed groove portion, and  
wherein the respective adjacent end faces, excluding the respective recessed groove portions, on inner periphery sides of the first, second, and third rings directly contact with one another.
- [2] A pin assembly according to claim 1, characterized in that each of slide portions between the first, second, and third rings includes a slide contact face through

which each of the rings directly contacts and a seal face of the sealing means corresponding to each slide contact face; and the slide face and the seal face form substantially a same plane in a radial direction.

- [3] A pin assembly according to claim 2, characterized in that, where outside diameters of the respective first, second, and third rings are d<sub>1</sub>, d<sub>2</sub>, and d<sub>3</sub>, the relationship thereof is d<sub>1</sub><d<sub>2</sub><d<sub>3</sub>.
- [4] A crawler type traveling apparatus comprising: a track frame; an idler tumbler; a sprocket wheel; an carrier roller; a track roller bogie axially supported to the track frame and including a track roller; and a crawler chain wound around the idler tumbler, the sprocket wheel, the carrier roller, and the track roller, characterized in that

the track roller bogie is axially supported to the track frame by the pin assembly according to any one of claims 1 to 3.

- [5] A crawler type traveling apparatus comprising: a track frame; an idler tumbler; a sprocket wheel; an carrier roller; a track roller bogie axially supported to the track frame and including a track roller; and a crawler chain wound around the idler tumbler, the sprocket wheel, the carrier roller, and the track roller, characterized in that

the track roller bogie includes a first bogie link axially supported to the track frame and a second

bogie link axially supported to the first bogie link and to which the track roller is mounted, and

the first bogie link is axially supported to the track frame by the pin assembly according to any one of claims 1 to 3.

- [6] A crawler type traveling apparatus comprising: a track frame; an idler tumbler; a sprocket wheel; an carrier roller; a track roller bogie axially supported to the track frame and including a track roller; and a crawler chain wound around the idler tumbler, the sprocket wheel, the carrier roller, and the track roller, characterized in that

the track roller bogie includes a first bogie link axially supported to the track frame and a second bogie link axially supported to the first bogie link and to which the track roller is mounted, and

the second bogie link is axially supported to the first bogie link by the pin assembly according to any one of claims 1 to 3.

- [7] A crawler type traveling apparatus comprising: a track frame; an idler tumbler; a sprocket wheel; an carrier roller; a track roller bogie axially supported to the track frame and including a track roller; and a crawler chain wound around the idler tumbler, the sprocket wheel, the carrier roller, and the track roller, characterized in that

the track roller bogie includes a first bogie

link axially supported to the track frame and a second bogie link axially supported to the first bogie link and to which the track roller is mounted, and the first bogie link and the second bogie link are axially supported to the track frame and to the first bogie link, respectively, by the pin assembly according to any one of claims 1 to 3.